



Greater San Diego

Science & Engineering Fair

The City of San Diego Environmental Services Department is pleased to recognize the following students whose science fair projects were selected as outstanding examples of environmental science and research. The department's panel of environmental professionals judged more than 80 projects and these students were selected as winners because of their clear, concise presentation, thorough research, and the value of their projects to the preservation of San Diego's environment.



Senior Division

First Place Andrew Redman, Torrey Pines High School

Development of a Shape Memory Alloy Controlled Household Chimney Damper

In his project, Andrew built an operational SMA (Shape Memory Alloy) Actuated Flue Damper device, which is economically and environmentally feasible, and reduces the amount of energy and natural gas used by the test water heater by up to 11%.

Second Place Joshua Rechaim, Torrey Pines High School

Harnessing Electrical Potential from Dripping Water

Joshua's project investigated the potential for generating electricity using an incline water dropper. After comprehensive and rigorous experimentation, it was determined that humidity and ionic content have enormous impact on electrostatic electricity generation.

Junior Division

First Place Khoa Tran, Farb Middle School

Making Efficient Use of Solar Panels

In his project, Khoa examined how solar panels can be used more efficiently. He tested solar panels with biconvex lenses, which concentrated the beams of light on the solar panels. His results showed that the use of convex lenses did not increase efficiency of the solar panels.

Second Place Melissa Hiebert, Mar Vista Middle School

Decomposition Speed of Compost

Melissa's project involved testing the decomposition of compost with humus, compost with a microbial compost starter, and compost with no added accelerator. She determined that compost starters do not increase the decomposition rate of compost.

Honorable Mention

Katie Rehm

Mt. Everest Academy

*Colors' Effect on Energy Absorption
Through Photovoltaic Cells*

Patricia Wang

Torrey Pines High School

*Wireless Pollution Sensor Networks
using Nanostructured Films*

Matthew Bauer

Warren-Walker

*Critical Variables of an Effective
Solar Box Cooker – Phase II*

Hector Lam

Blessed Sacrament

Carper Cleaners – Best and Safest

**Congratulations to All Students for their
Outstanding Scientific Achievement!**